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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,265	08/28/2000	Chih-Yuan Chang	LUCENT-01500	6764
28960	7590	09/30/2004	EXAMINER	
HAVERSTOCK & OWENS LLP 162 NORTH WOLFE ROAD SUNNYVALE, CA 94086			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/649,265

Applicant(s)

CHANG ET AL.

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Response filed on 7/29/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,9-19,22-28,30-33 and 36-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9,15-19,22,28,30-33,36,42-44,46-50,52-56 and 58-60 is/are rejected.
- 7) ☒ Claim(s) 10-14,23-27,37-41,45,51 and 57 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Withdrawal of Finality***

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3, 4, 9, 15-17, 22, 28, 30, 31, 36, 43, 44, 46, 49, 50, 52, 55, 56, 58 and 60 are rejected under 35 USC 102(e) as being anticipated by Zimmerman et al. (US Pat. 6,785,252 B1).

In claims 1, 3, 4, 9, 15-17, 22, 28, 30, 31, 36, 43, 49, 55 and 60, Zimmerman et al. discloses a plurality of CPE transmitting requests for bandwidth to a base station. The CPEs 'requests combine polling technique wherein the base station allocates contention bandwidth

representing slots to CPE; (allocating slots in contention modes, see col.12, line 50- col.13, line 5 & Fig.4-10) and piggybacking technique wherein CPEs transmits request to base station which allocates the requested bandwidth to the CPEs. The CPE may request to increase or decrease bandwidth in accordance with its bandwidth demand, priority of services and QOS. The bandwidth allocates in time slots (allocating slots in request and grant mode, prioritizing the the request and grant mode by adjusting the bandwidth). See col.13, lines 25-60 & col.14, lines 40-45 & Fig.11. The base station allocates available bandwidth between various services depending on priority (dynamically adjusting slots in request and grant mode accordance to a change in the request). See col.9, lines 1-10 & col.21, lines 55-60. In Fig.12, a weight fair queue in the base station is used to control bandwidth request to ensure that each request is given a portion of remaining available bandwidth ( a weighted fair queue for utilizing an adaptive contention scheduling). See col.22, lines 15-30. The weighted fair queue requires that a request having an assigned weight to determine the percentage of the available bandwidth the CPE is eligible to receive (claims 4, 9, 22, 36, a percentage is assigned to the CPE's request, see col.23, lines 20-25).

In claims 46, 52 and 58, Zimmerman et al. discloses, in Fig.12, the bandwidth allocated to a selected CPE is disclosed in an uplink subframe map which indicates a certain amount of bandwidth allocated to the selected CPE (each of contention slots is associated with a unique user marking a request). See col.22, lines 45-50.

In claims 44, 50 and 56, the limitations of these claims have been addressed in claims 1, 15 and 28

Claims 5, 6, 18, 19, 32 and 33 are rejected under 35 USC 103(a) as being unpatentable over Zimmerman et al. (US Pat. No. 6,785,252 B1) in view of Prieto, Jr. et al.(Pat. 6,381,228 B1).

In claims 5, 6, 18, 19, 32 and 33, **Zimmerman et al.** does not disclose the sum of the percentage value is 100%, the percentage value is a dynamically changing value. **Prieto, Jr. et al.** discloses each user requesting slot is reserved a fraction of available bandwidth (a percentage value is assigned to each of the slotted multiple access mode). See col.10, lines 15-20. User one has 50% of the bandwidth, users 2 &3 has 25% of the bandwidth each (sum of the percentage value is 100%). See col.10, lines 40-45. The percentage of the bandwidth may be changed in accordance with rate, network load (the percentage value is a dynamically changing value). See col.10, lines 45-65. Therefore, it would have been obvious to one ordinary skill in the art to dynamically determine percentage values assigned for each contention mode and request & grant mode in the Zimmerman et al. by using Prieto, Jr. et al.

Claims 42, 47, 48, 53, 54 and 59 are rejected under 35 USC 103(a) as being unpatentable over Zimmerman et al. (US Pat. No. 6,785,252 B1).

In claims 42, 48 and 54, Zimmerman et al. does not not explicitly disclose the second number of contention slots are fixed and predetermined. It is a well-known skill in the art that in the polling method, a group of CPEs each responses to the pollling sent from base station to access the allocated bandwidth. Therefore, the second number of contention slots corresponding to number of CPEs are fixed and predetermined (second number of contention slots are fixed, predetermined).

In claims 47, 53 and 59, Zimmerman et al. does not disclose that if the user does not continue to make request, the contention slot associated with the user is removed to reduce the number of contention slots. It is a well-known skill in the art to release a contention slot for other user when its associated user is not requesting. Therefore, it would have been obvious in Zimmermann et al. to release the contention slot of the associated user not using the contention slot. The purpose of releasing the unused slot is to assign to other users.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3-6, 9-19, 22-28, 30-33 and 36-60 have been reconsidered.

Claims 1, 3-6, 9, 15-19, 22, 28, 30-33, 36, 42-44, 46-50, 52-56 and 58-60 but are moot in view of the new ground(s) of rejection.

Claims 10-14, 23-27, 37-41, 45, 51 and 57 are objected.

### ***Allowable Subject Matter***

Claims 10-14, 23-27, 37-41, 45, 51 and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 10, 23 and 37, the prior art does not disclose two new requests for generating contention slots are placed in the weighted fair queue when a collision occurs between two users.

In claims 12, 25, 39, the prior art does not disclose the weighted fair queue adjusts the rate of generating one or more contention slots automatically.

In claims 45, 51 and 57, the prior art does not disclose if multiple new user access requests cause a collision, a number of additional contention slots are generated according to the request and grant made, such that the number of additional contention slots corresponds to at least a number of the multiple user access requests causing the collision thereby increasing the first number of contention slots by the number of additional contention slots.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ahmadi et al. (US Pat. No. 5,384,777) discloses Adaptive Medium Access Control Scheme for Wireless LAN.

Hall (US Pat. No. 5,499,243) discloses Method and Apparatus for Coordinating Transfer of Information Between a Base Station and a Plurality of Radios.

Bauchot (US Pat. No. 5,970,062) discloses Method and Apparatus for Providing Wireless Access to an ATM network.

Lee et al. (US Pat. No. 6,529,520 B1) discloses Method and Device for Bandwidth Allocation in Multiple Access Protocols with Contention-Based Reservation.

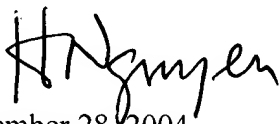
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The

examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

A handwritten signature in black ink, appearing to read 'H. Nguyen'.

September 28, 2004